BLACK & VEATCH

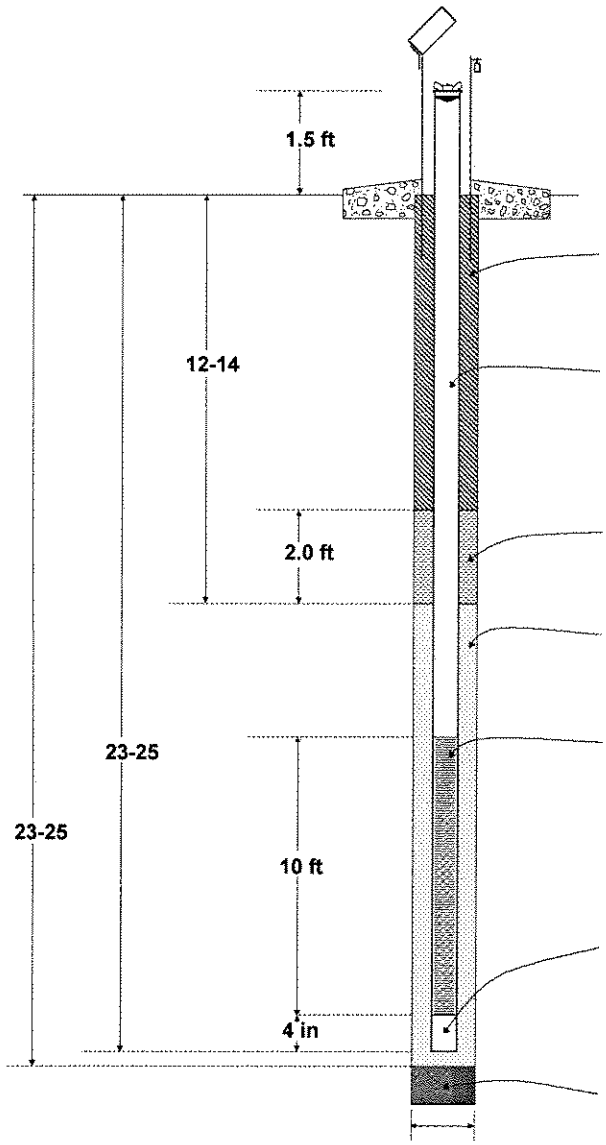
TYPICAL 25-FOOT LOG

CLIENT	PROJECT	PROJECT NO.
SFWMD	Everglades Test Cells	140297

PROJECT LOCATION	COORDINATES	TOP OF RISER ELEVATION (DATUM)	DATE
West Palm Beach, Florida	N Vary E Vary	Varies ft (NAD 1983-99)	03/2005

STRATUM MONITORED
Fort Thompson Formation

INSPECTOR	CHECKED BY	APPROVED BY
Norm Holst	Norm Holst	Paul Zaman



SURFACE PROTECTION
Type: Steel Tube
Top of Riser: Varies (ft) (NAD 1983-99)
Ground Surface: Not Measured

SURFACE SEAL
Type: Cement/Bentonite Grout

RISER PIPE
Diameter: 2 inch
Type: PVC Pipe 10 Foot Long Sections

PRIMARY SEAL
Type: Fine Washed Silica Sand

FILTER MATERIAL
Type: Coarse Washed Silica Sand

SCREEN
Diameter: 2 inches
Type: PVC Pipe
Slot dimensions: 0.02 Inch Slot

SEDIMENT TRAP
Diameter: 2 inches
Type: PVC

LOWER SEAL
Type: None

BORING DIAMETER
DIAMETER: 6 in

*Note-Diagram not shown to scale

INSTALLATION METHOD: The boring was advanced to the top of the hard limestone layer typically encountered at 23 to 25 feet bgs. The piezometer screen and riser were lowered to the bottom of the hole, and the sand pack was tremied into the hole to about 1 foot above the top of the screen. About 2 feet of fine sand was tremied on top, and cement/ bentonite grout was tremied in to fill the rest of the hole. The riser was cut off about 1.5 feet above the ground surface, and the protective casing suspended over the riser into the grout until it set.

NOTES: Typical Shallow (23 - 25 foot) Piezometer Installation

BLACK & VEATCH

TYPICAL 60 FOOT LOG

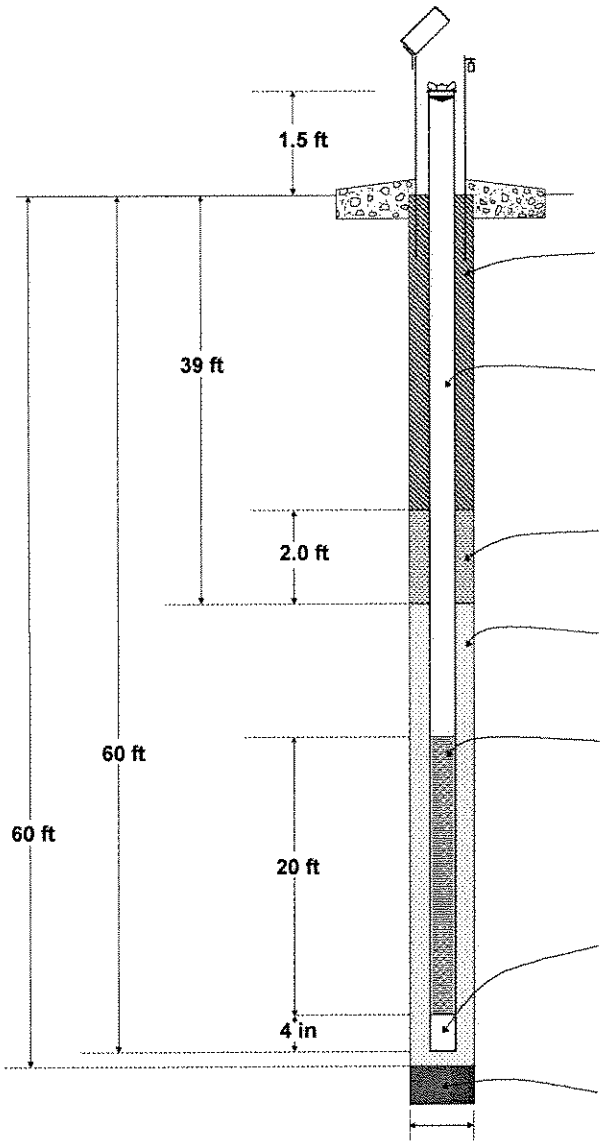
TYPICAL 60 FOOT NO. 2
SHEET 1 OF 1

CLIENT	PROJECT	PROJECT NO.
SFWMD	Everglades Test Cells	140297

PROJECT LOCATION	COORDINATES	TOP OF RISER ELEVATION (DATUM)	DATE
West Palm Beach, Florida	N Vary E Vary	Varies ft (NAD 1983-99)	02 - 03 2005

STRATUM MONITORED: Caloosahatchee Formation

INSPECTOR	CHECKED BY	APPROVED BY
Norm Holst	Norm Holst	Paul Zaman



SURFACE PROTECTION
Type: Steel Tube
Top of Riser: Varies (ft) (NAD 1983-99)
Ground Surface: Not Measured

SURFACE SEAL
Type: Cement/Bentonite Grout

RISER PIPE
Diameter: 2 inch
Type: PVC Pipe 10 Foot Long Sections

PRIMARY SEAL
Type: Fine Washed Silica Sand

FILTER MATERIAL
Type: Coarse Washed Silica Sand

SCREEN
Diameter: 2 inches
Type: PVC Pipe
Slot dimensions: 0.02 Inch Slot

SEDIMENT TRAP
Diameter: 2 inches
Type: PVC

LOWER SEAL
Type: None

BORING DIAMETER
DIAMETER: 6 in
*Note-Diagram not shown to scale

INSTALLATION METHOD: The boring was advanced to 60 feet bgs. The piezometer screen and riser were lowered to the bottom of the hole, and the sand pack was tremied into the hole to about 1 foot above the top of the screen. About 2 feet of fine sand was tremied on top, and cement/bentonite grout was tremied in to fill the rest of the hole. The riser was cut off about 1.5 feet above the ground surface, and the protective casing suspended over the riser into the grout until it set.

NOTES: Typical 60 Foot Piezometer Installation

BLACK & VEATCH

TYPICAL 100 FOOT LOG

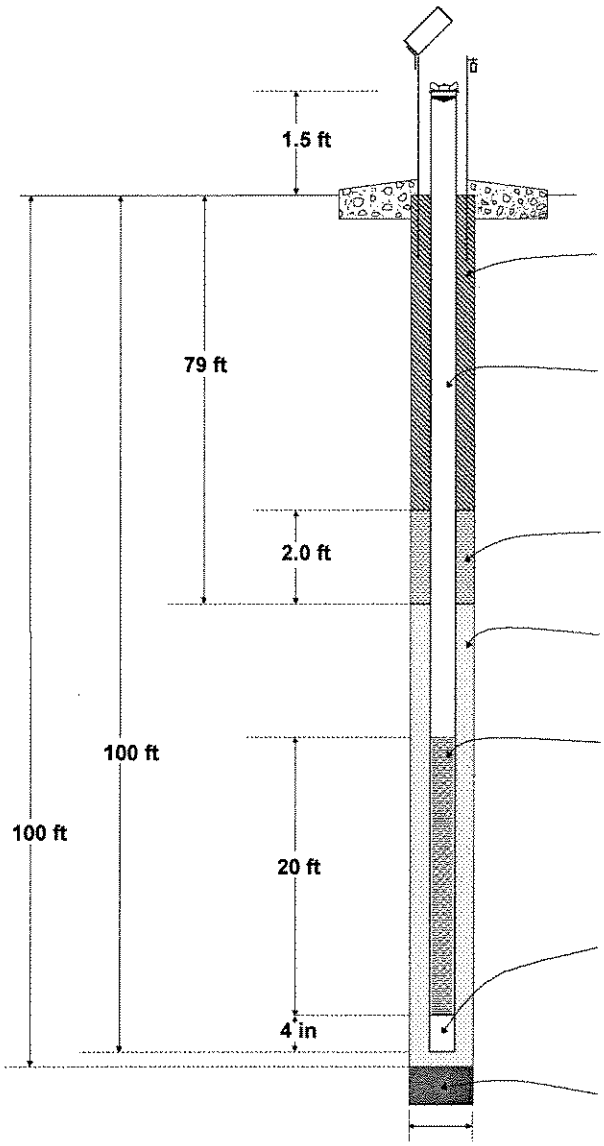
TYPICAL 100 FOOT NO. 3
SHEET 1 OF 1

CLIENT	PROJECT	PROJECT NO.
SFWMD	Everglades Test Cells	140297

PROJECT LOCATION	COORDINATES	TOP OF RISER ELEVATION (DATUM)	DATE
West Palm Beach, Florida	N Vary E Vary	Varies ft (NAD 1983-99)	2/3/2005

STRATUM MONITORED
Caloosahatchee/Tamiami

INSPECTOR	CHECKED BY	APPROVED BY
Norm Holst	Norm Holst	Paul Zaman



SURFACE PROTECTION
Type: Steel Tube
Top of Riser: Varies (ft) (NAD 1983-99)
Ground Surface: Not Measured

SURFACE SEAL
Type: Cement/Bentonite Grout

RISER PIPE
Diameter: 2 inch
Type: PVC Pipe 10 Foot Long Sections

PRIMARY SEAL
Type: Fine washed Silica Sand

FILTER MATERIAL
Type: Coarse Washed Silica Sand

SCREEN
Diameter: 2 inches
Type: PVC Pipe
Slot dimensions: 0.02 Inch Slot

SEDIMENT TRAP
Diameter: 2 inches
Type: PVC

LOWER SEAL
Type: None

BORING DIAMETER
DIAMETER: 6 in
*Note-Diagram not shown to scale

INSTALLATION METHOD: The boring was advanced to 100 feet bgs. The piezometer screen and riser were lowered to the bottom of the hole, and the sand pack was tremied into the hole to about 1 foot above the top of the screen. About 2 feet of fine sand was tremied on top of the coarse sand, and cement/bentonite grout was tremied in to fill the rest of the hole. The riser was cut off about 1.5 feet above the ground surface, and the protective casing suspended over the riser into the grout until it set.

NOTES: Typical Shallow (100 foot) Piezometer Installation

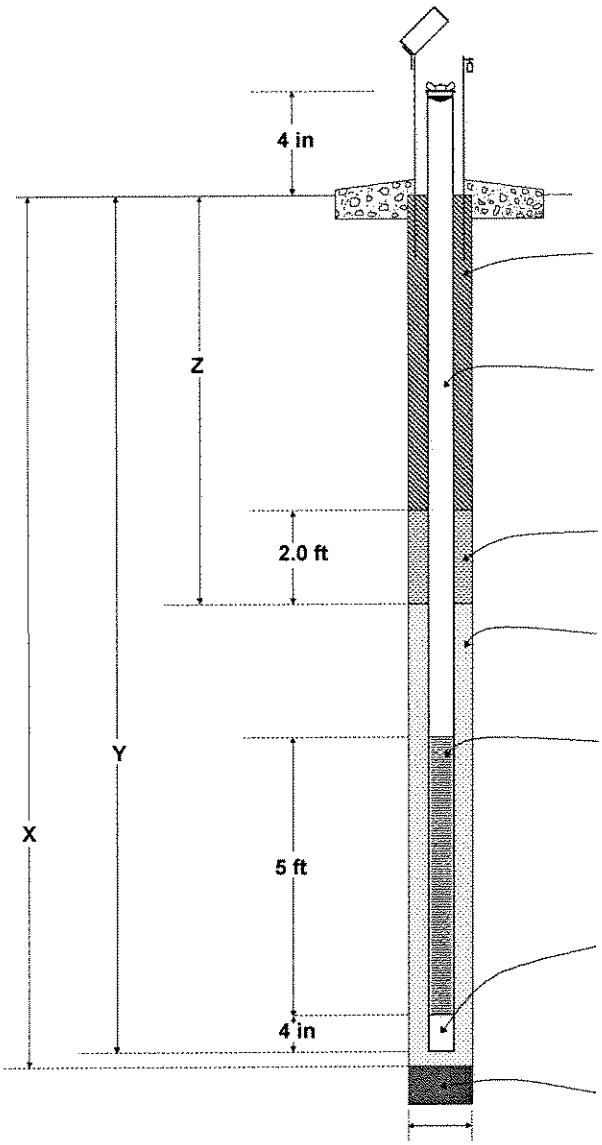
BLACK & VEATCH

TYPICAL EMBANKMENT

TYPICAL EMBANKMENT NO. 4

SHEET 1 OF 1

CLIENT	PROJECT		PROJECT NO.
SFWMD	Everglades Test Cells		140297
PROJECT LOCATION	**COORDINATES**	**TOP OF RISER ELEVATION (DATUM)**	**DATE**
West Palm Beach, Florida	N Vary E Vary	Varies ft (NAD 1983-99)	03/2005
STRATUM MONITORED			
Fort Thompson			
INSPECTOR	**CHECKED BY**	**APPROVED BY**	
Norm Holst	Norm Holst	Paul Zaman	



SURFACE PROTECTION

Type: PVC Pipe

Top of Riser: Varies (ft) (NAD 1983-99)

Ground Surface: Not Measured

SURFACE SEAL

Type: Cement/Bentonite Grout

RISER PIPE

Diameter: 2 inch

Type: PVC Pipe 10 Foot Long Sections

PRIMARY SEAL

Type: Fine Washed Silica Sand

FILTER MATERIAL

Type: Coarse Washed Silica Sand

SCREEN

Diameter: 2 inches

Type: PVC Pipe

Slot dimensions: 0.02 Inch Slot

SEDIMENT TRAP

Diameter: 2 inches

Type: PVC

LOWER SEAL

Type: None

BORING DIAMETER

DIAMETER: 6 in

*Note-Diagram not shown to scale

INSTALLATION METHOD: The boring was advanced to 15 feet below the stripped caprock surface. The piezometer screen and riser were lowered to the bottom of the hole, and the sand pack was tremied into the hole to about 1 foot above the top of the screen. About 2 feet of fine sand was tremied on top of the coarse sand, and cement/bentonite grout was tremied in to fill the rest of the hole. A concrete block and heavy PVC protective pipe were placed around the riser. The embankment fill was placed around the riser and protective pipe.

NOTES: Typical Embankment Piezometer Installation
X and Y = About 22 ft in TCI and 32 ft in TC2
Z = About 14 ft in TCI and 24 ft in TC2

BLACK & VEATCH

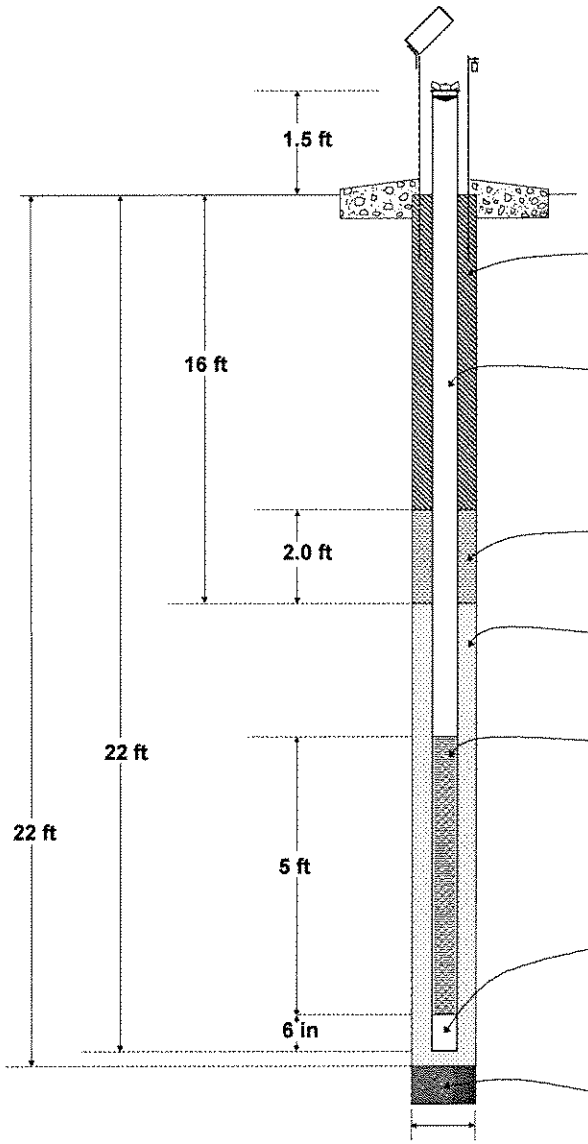
TYPICAL TC-1

CLIENT	PROJECT	PROJECT NO.
SFWMD	Everglades Test Cells	140297

PROJECT LOCATION	COORDINATES	TOP OF RISER ELEVATION (DATUM)	DATE
West Palm Beach, Florida	N Vary E Vary	Varies ft (NAD 1983-99)	03/2005

STRATUM MONITORED
Fort Thompson Formation (Caprock)

INSPECTOR	CHECKED BY	APPROVED BY
Norm Holst	Norm Holst	Paul Zaman



SURFACE PROTECTION
Type: Steel Tube
Top of Riser: Varies (ft) (NAD 1983-99)
Ground Surface: 23.5 ft (ft) (NAD 1983-99)

SURFACE SEAL
Type: Cement/Bentonite Grout

RISER PIPE
Diameter: 2 inch
Type: PVC Pipe 10 Foot Long Sections

PRIMARY SEAL
Type: Fine Washed Silica Sand

FILTER MATERIAL
Type: Coarse Washed Silica Sand

SCREEN
Diameter: 2 inches
Type: PVC Pipe
Slot dimensions: 0.02 inch slot

SEDIMENT TRAP
Diameter: 2 inches
Type: PVC

LOWER SEAL
Type: None

BORING DIAMETER
DIAMETER: 6 in
*Note-Diagram not shown to scale

INSTALLATION METHOD: The boring was advanced through the embankment fill and 5 feet into the foundation. The piezometer screen and riser were lowered to the bottom of the hole, and the sand pack was tremied into the hole to about 1 foot above the top of the screen. About 2 feet of fine sand was tremied on top of the coarse sand, and cement/bentonite grout was tremied in to fill the rest of the hole. The riser was cut off about 1.5 feet above the fill surface, and the protective casing suspended over the riser into the grout until it set.

NOTES: Typical TC-1 Foundation Piezometer Installation